HOW TO ATTRACT BIRDS IN NORTHEASTERN UNITED STATES

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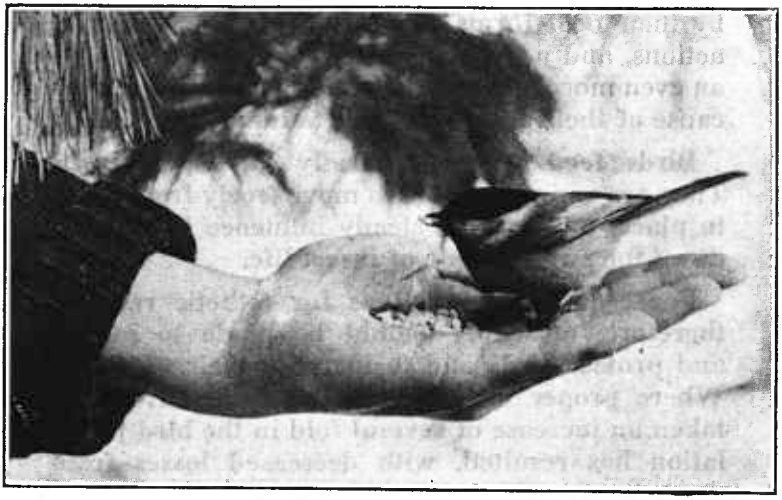

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BIRDS appeal strongly to the interests and affections of mankind. Not only do they charm by their neat forms, harmonious colors, sprightly actions, and usually pleasing notes, but they have an even more important claim upon our esteem because of their great economic value.

Birds feed upon practically all insect pests. They are voracious, able to move freely from place to place, and exert a steady influence in keeping down the swelling tide of insect life.

For economic as well as for esthetic reasons, therefore, an effort should be made to attract and protect birds and to increase their numbers. Where proper measures of this kind have been taken an increase of several fold in the bird population has resulted, with decreased losses from depredations of injurious insects.

This bulletin is one of a series intended to describe the best methods of attracting birds in various parts of the United States, especially by providing a food supply and other accessories about the homestead. The area to which it is adapted is shown by the shaded portion of the map on page 3.

HOW TO ATTRACT BIRDS IN NORTHEASTERN UNITED STATES.

CONTENTS.

THE means of increasing the number of birds about the home are few and simple. They comprise adequate protection and the provision of suitable nesting places, food, and water. It is planned in a series of publications, of which this bulletin relating to northeastern United States (fig. 1) is the first, to recommend practicable methods of attracting birds about homes in the various parts of the United States. Especial attention will be given to the value of fruit-bearing shrubs and trees, as less information relating to these as a means of attracting birds is available than concerning more widely known but not more important measures, as protection, winter feeding, and the supplying of nesting boxes and water. Furthermore, the last-named measures need not vary so much with the locality as does choice of fruit-bearing shrubs and trees.

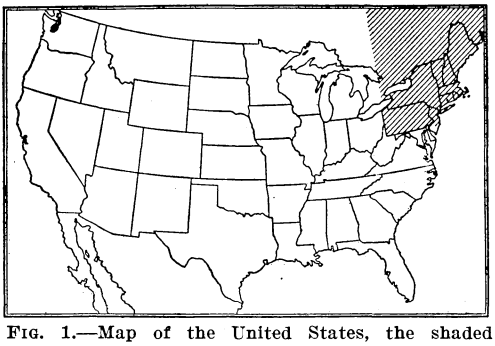


FIG. 1.—Map of the United States, the shaded area showing the territory to which this bulletin applies.

PROTECTION.

Protection is the prime requisite for increasing the number of birds in any area, and the results of protection are in direct proportion to its thoroughness. Besides being insured against every form of persecution by human kind, birds must be defended from various

NOTE.—The original issue of this bulletin appeared December 14, 1914.

natural foes. The most effectual single step is to surround the proposed bird sanctuary with a vermin-proof fence (fig. 2). Such a

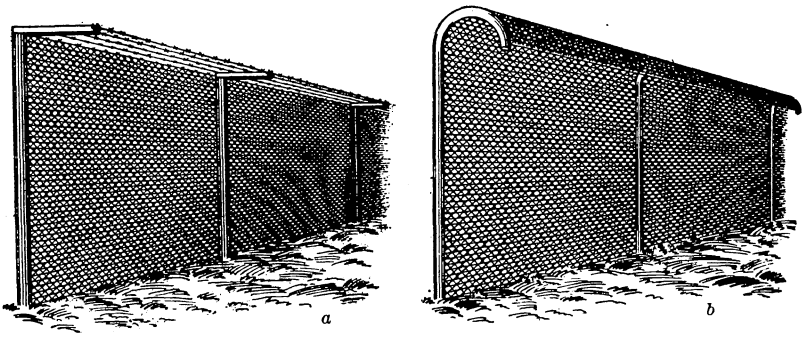


FIG. 2.—Cat-proof fence; *a*, with barbed wire; *b*, with loose overhanging netting.

fence should prevent entrance either by digging or by climbing, but will serve its greatest use if it can not be climbed, and is therefore cat proof. For this purpose the erect part of the fence above ground should be 6 feet high, and the weave should not be more than 1½-inch mesh. The overhang should be 2 feet wide, and if strung with wires these should be not more than 1½ inches apart. If it is impracticable to build an impenetrable fence, the next best device is to put guards (fig. 3) of sheet metal on all nesting trees and on poles supporting bird houses. This should be done in any case where squirrels or snakes are likely to intrude, as it is usually impossible to fence out these animals. Tree guards should be 6 feet or more above ground. Attacks by hawks, owls, crows, jays, or other enemies are best controlled by eliminating the destructive individuals. Those who wish to combat English sparrows will find full directions for so doing in Farmers' Bulletin 493.[1]

BREEDING PLACES.

Although a considerable number of our native birds build their nests on the ground, the majority place them in trees or shrubs, either in holes or on the limbs or in the crotches. Shrubbery and trees for nesting sites, therefore, are essential for making a place attractive to birds, and a double purpose is served if the kinds planted are chosen from the list of fruit-bearing species given farther on. Shrubs should be allowed to form thickets and should be pruned back severely when young so as to produce numerous crotches.

Constant removal of old trees and modern tree-surgery have resulted in a great diminution in the number of tree cavities, the natural homes of most of our hole-nesting birds. Fortunately, most of these birds will utilize artificial nest cavities or bird houses. The

[1] Dearborn, Ned, "The English Sparrows as a Pest," revised, 1917.

sizes useful for various birds, plans for making, and illustrations of numerous bird boxes are given in Farmers' Bulletin 609.[1] Styles of bird houses may be almost endlessly varied. These structures may be improvised by anyone, but they may be purchased also from numerous dealers. The most common errors in putting out bird houses are choosing poor locations and supplying too many boxes. A bird house needs only partial shade, and houses on poles usually are taken. Martins prefer a house standing apart from trees. Entrances to boxes should be sheltered by projecting roofs and should face away from the prevailing wind and rain storms.

All bird houses should be constructed so that the interior may easily be examined and cleaned. This is not only important to permit last year's rubbish to be thrown out, but is necessary in much of the area for which the present bulletin is written to facilitate inspection for gypsy-moth egg masses and cocoons.

As a rule, birds do not like being crowded, and if a place is studded with bird houses only a few of them will be occupied. Birds not only do not want bird neighbors too near, but they are impatient of human meddling, and therefore should be granted as much privacy as possible during the actual incubating and brooding. Nests built in shrubbery are especially likely to come to a bad end if the birds are frequently disturbed.

If ground-nesting birds, as bobolinks, meadowlarks, and bobwhites, are to be protected, grass in the nesting fields must not be cut during the breeding season.

WATER SUPPLY.

Nothing has a more potent attraction for birds during hot weather than drinking and bathing places. The birds' water supply should be a pool not more than a few inches deep, the bottom sloping gradually upward toward the edge. Both bottom and edge should be rough, so as to afford a safe footing. A giant pottery saucer (fig. 4, *a*) is an excellent device, or the pool may be made of concrete or even metal, if the surface be roughened (fig. 4, *b*). The bird bath may be elevated, or on the

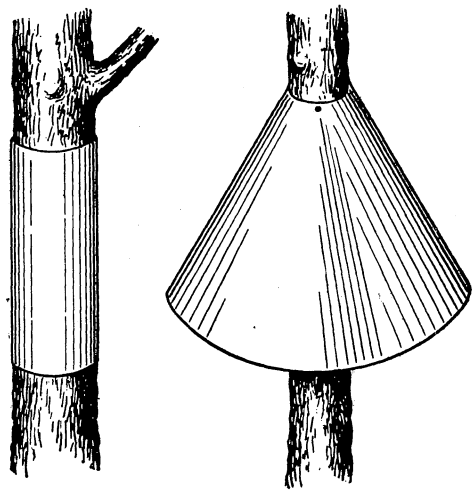


FIG. 3.—Tree guards.

[1] Dearborn, Ned, "Bird Houses and How to Build Them," revised, 1917.

ground if on an open space where skulking enemies can not approach too near.

A water supply is appreciated in winter as well as in summer. If running water can not be provided, that supplied should be warmed to delay freezing.

FOOD SUPPLY.

Food supply is the vital factor in bird life and the most important single offering that can be made in efforts to attract birds. It is important to note that an ample supply of food prior to and during the nesting season tends to increase the number of eggs laid and also the number of broods in a season. Bird food may be supplied in two ways—by planting trees, shrubs, and herbs which produce seeds or fruits relished by birds, and by exposing food in artificial devices. The most familiar phase of the latter method is winter feeding.

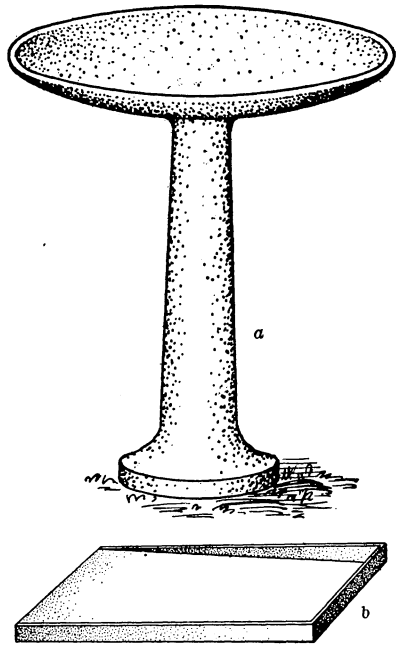


FIG. 4.—Bird baths: *a*, Pottery; *b*, metal or concrete.

ARTIFICIAL FOOD.

During the season when the natural food supply is at its lowest ebb birds respond most readily to our hospitality. Winter feeding has become very popular, and the result has been to bring about better understanding between birds and human kind.

The winter foods commonly used include suet or other fat, pork rinds, bones with shreds of meat, cooked meats, meal worms, cut-up apples, birdseed, buckwheat, crackers, crumbs, coconut meat, cracked corn, broken dog biscuits or other bread, hemp seed, millet, nut meats of all kinds (especially peanuts), whole or rolled oats, peppers, popcorn, pumpkin or squash seeds, raw or boiled rice, sunflower seeds, and wheat.

The methods of making these supplies available to birds are as varied as the dietary itself. A device very commonly used is the food tray or shelf (figs. 5 and 6). This may be put on a tree or pole, by a window or at some other point about a building, or strung upon a wire or other support on which it may be run back and forth. The last device is useful in accustoming birds to feed nearer and

nearer a comfortable observation point. A fault with food shelves is that wind and rain may sweep them clean and snow may cover the food. These defects may be obviated in part by adding a raised ledge about the margin or by placing the shelf in the shelter of a wall or shielding it with evergreen branches on one or more sides.

Feeding devices not affected by the weather are preferable. An excellent one is a coconut with a hole bored in one end. (Fig. 7.) The cavity is filled with chopped suet and nuts or other food mixture, and the nut is suspended by a wire from a limb. The size of the hole regulates the character of the guests; if small, large birds can not gobble the supply. The coconut meat as well as the stuffing is eaten. Cans with small openings may be substituted for coconuts. Food baskets

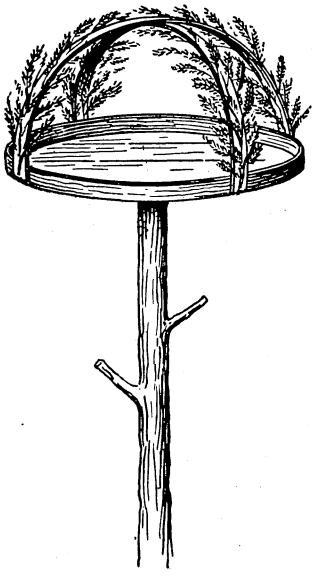


FIG. 5.—Food tray.

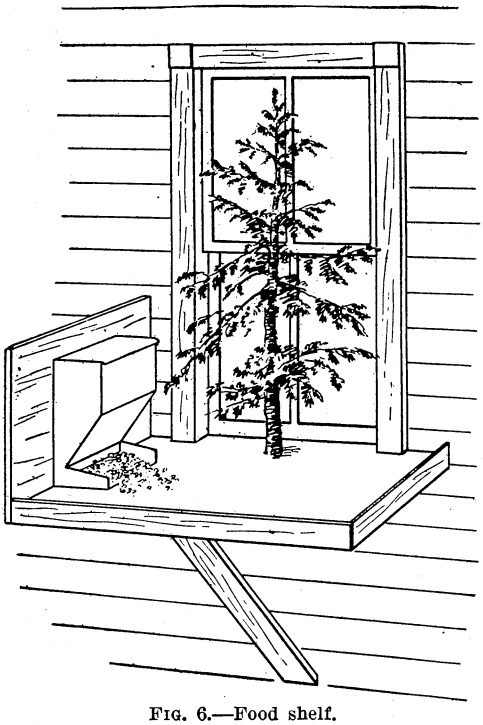


FIG. 6.—Food shelf.

of any desired size made of wire netting or a metal grating may be hung up or fastened to the trunk of a tree. Food mixtures in melted fat may be poured into holes made in a branch or stick (fig. 8) or in cracks of bark or over evergreen branches. All of these devices minimize or obviate the disturbing effects of stormy weather.

More elaborate apparatus for the same purpose comprises various forms of food hoppers and food houses. The food hoppers (figs. 6 and 9) in common use for domestic fowls are adapted to the feeding of birds, and some special forms are now manufactured for wild birds.

The food house is a permanent structure, with solid roof, and glass on one or more sides to permit observations (fig. 10). The food trays it contains are entirely sheltered from the weather. In one style this result is obtained by mounting the house on a pivot and furnishing it with vanes (fig. 11) which if large enough keep the open side always from the wind.

FIG. 7.—Coconut larder.

Game birds and sparrows may be provided with feeding places by erecting low hutches or making wigwamlike shocks of corn or grain sheaves under which food may be scattered. The opening should be to the south.

Those who desire to have birds about their homes should not feel that their power to attract them is gone when winter is over. Winter feeding easily passes into summer feeding, and experience proves that some birds gladly avail themselves throughout the year of this easy mode of getting a living.

NATURAL FOOD.

We have thus far considered ways of feeding birds tidbits we ourselves have gleaned. We may feed them by another method, by cultivating their natural food plants and allowing them to reap the harvest in their own way.

Less has been done in this respect for the true seed-eating birds than for those fond of pulpy fruits. The reason is obvious, however. Our seed-eating birds largely patronize weeds, which we do not wish to cultivate, while the fruit eaters depend upon many plants which we hold in such esteem for their ornamental value that they are generally cultivated.

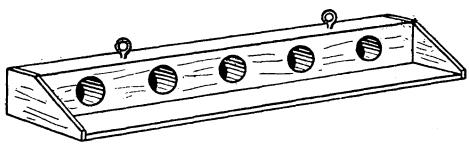


FIG. 8.—Feeding stick.

FEEDING SEED-EATING BIRDS.

Something can be done, however to attract the seed eaters about our homes. A number of commonly cultivated annual plants, belonging to the same groups as those upon which the birds feed extensively in nature, produce good crops of seeds. These plants, being dependent upon cultivation, can be used without fear that they will become pests. The following are suggested for the purpose: Prince's

feather (*Amaranthus cruentus*), love lies bleeding (*A. caudatus*), asters, calandrinias, blessed thistle (*Carduus benedictus*), centaureas, California poppies (*Eschscholtzia*), sunflowers, tarweed (*Madia elegans*), forget-me-nots, *Polygonum orientale* and *P. sachalinense*, *Portulaca*, *Silene*, and sugar cane (sorghum varieties).

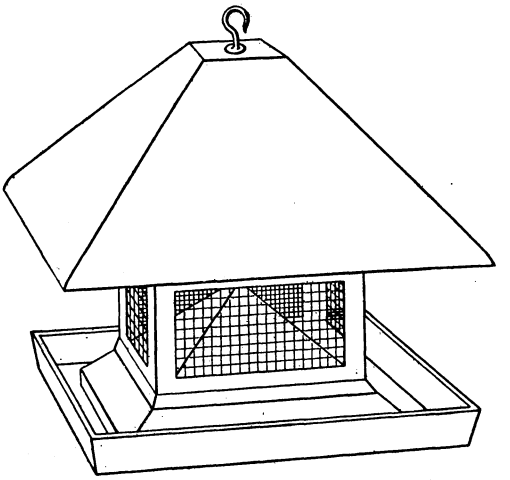


FIG. 9.—Food hopper (roof detachable).

The various millets are relished by nearly all seed-eating birds. Common millet (*Panicum miliaceum*), Japanese millet or barnyard grass (*Echinochloa crus-galli*), and German millet or Hungarian grass (*Setaria italica*) may be obtained from most seedsmen, and should be planted in abundance by those wishing to attract granivorous birds. The height and stiffness of stalk of varieties of sorghum should make these abundant seeders valuable in winter.

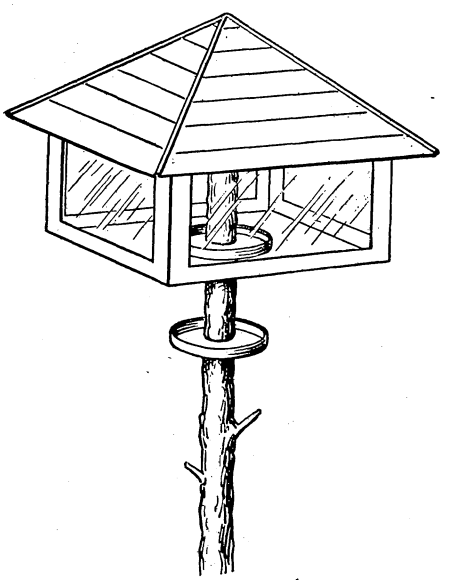


FIG 10.—Food house.

Japanese millet holds its seeds well, and, if planted thickly where it can grow up through a horizontal lattice work, makes a valuable cover and feeding place for winter birds. Canary grass (*Phalaris canariensis*) and various species of *Pennisetum* also are good for seed-eating birds.

Alders and birches bear in their numerous cones a supply of seeds which are eagerly sought for by redpolls, siskins, and goldfinches during the winter. Still another group of birds may be catered to by planting ashes and box elders. The winged fruits of these trees are opened and the seeds eaten by pine and evening grosbeaks, the visits of these birds being largely regulated by the supply of this

kind of food. Larches, pines, and other conifers are attractive to crossbills as well as to some of the species just mentioned.

FEEDING FRUIT-EATING BIRDS.

Feeding fruit-eating birds is best accomplished by planting selected species of fruit-bearing shrubs and trees. Through late spring and summer there is usually an abundance of insect food in addition to fruit enough for all the birds. So far as fruit alone is concerned, fall is the season of overflowing abundance; in winter the supply gradually decreases, and late winter and early spring are the seasons of actual scarcity. This is the critical time of year for many birds, and a plentiful supply of wild fruit will tide them over. Fortunately, everywhere in the United States there are some fruits that persist until there is no longer any need of them. If enough are planted, no birds able to live on this class of food should starve. The best of these long persisting fruits are juniper, bayberry, thorn apples and related fruits, holly, and snowberry.

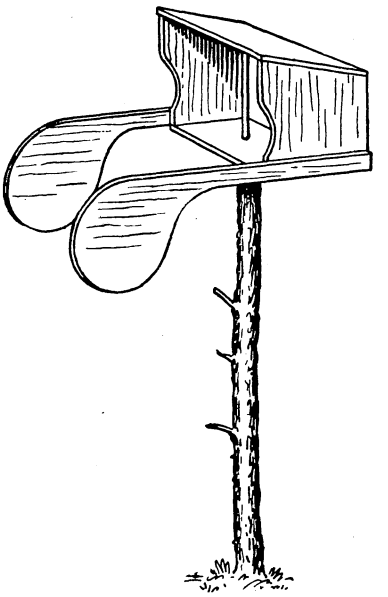


FIG. 11.—Food house on pivot.

The species listed in Table 1 are selected from a much larger number which are known to be favorites with fruit-eating birds. Various considerations have influenced choice, as ornamental value, earliness, lateness, or length of fruiting season, and especially availability of the plants through ordinary channels of trade. The data on fruiting seasons have been compiled from the principal herbaria of the Northeastern States, with a few additions from other sources.

The fruiting seasons indicated include the earliest and latest dates recorded for the Northeastern States. Hence it can not be expected that fruit will be available in any one locality throughout the entire bearing season of a plant unless a large number of plants are set out and in a variety of situations. Purchasers may obtain information from nursery catalogues as to where, when, and how to plant. Notes on species which may be substituted for some of those in the main list, and other comments, follow the table.

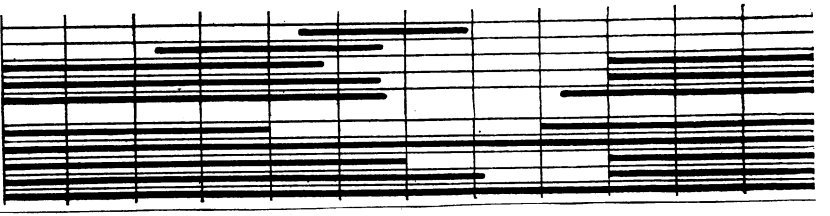
TABLE 1.—*Seasons of fruits attractive to birds.*

Common name.	Scientific name.	Native or introduced.	Fruiting season.
			Jan. Feb. Mar. Apr. May. June. July. Aug. Sept. Oct. Nov. Dec.
Juniper	*Juniperus communis*	Native	
Red cedar	*Juniperus virginiana*	do	
Green brier	*Smilax rotundifolia*	do	
Bayberry	*Myrica carolinensis*	do	
Hackberry	*Celtis occidentalis*	do	
Red mulberry	*Morus rubra*	do	
White mulberry	*Morus alba*	Introduced	
Pokeweed	*Phytolacca decandra*	Native	
Barberry	*Berberis vulgaris*	Introduced	
Sassafras	*Sassafras variifolium*	Native	
Spice bush	*Benzoin aestivale*	do	
Wild gooseberry	*Ribes cynosbati*	do	
Red currant	*Ribes vulgare*	Introduced	
Asiatic currant [1]	*Ribes fasciculatum*	do	
Flowering crab apple	*Pyrus floribunda*	do	
Chokeberry	*Pyrus melanocarpa*	Native	
Mountain ash	*Pyrus americana*	do	
Juneberry	*Amelanchier canadensis*	do	
Asiatic service-tree [2]	*Amelanchier asiatica*	Introduced	
Cockspur thorn	*Crataegus crus-galli*	Native	
Washington thorn	*Crataegus phaenopyrum*	Introduced	
English thorn	*Crataegus oxyacantha*	do	
Wild strawberry	*Fragaria americana*	Native	
Wild blackberry	*Rubus allegheniensis*	do	
Wild blackberry	*Rubus triflorus*	do	
Wild blackberry	*Rubus canadensis*	do	
Pasture rose [1]	*Rosa humilis*	do	
Wild black cherry	*Prunus serotina*	do	
Wild red cherry	*Prunus pennsylvanica*	do	
Beach plum [1]	*Prunus maritima*	do	

[1] Fruit becoming dry at end of season.
[2] Apparently procurable only from foreign dealers.

TABLE 1.—*Seasons of fruits attractive to birds*—Continued.

Common name.	Scientific name.	Native or introduced.	Fruiting season. Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Sand cherry	*Prunus pumila*	Native												
Crowberry	*Empetrum nigrum*	do												
Smooth sumac	*Rhus glabra*	do												
Fragrant sumac	*Rhus aromatica*	do												
Holly [1]	*Ilex opaca*	do												
Inkberry [1]	*Ilex glabra*	do												
Black alder [1]	*Ilex verticillata*	do												
Mountain holly [1]	*Nemopanthus mucronata*	do												
Bittersweet	*Celastrus scandens*	do												
Buckthorn	*Rhamnus cathartica*	Introduced												
Virginia creeper	*Psedera quinquefolia*	Native												
Japanese creeper [2]	*Ampelopsis tricuspidata*	Introduced												
Summer grape [2]	*Vitis aestivalis*	Native												
Frost grape	*Vitis vulpina*	do												
Leatherwood	*Dirca palustris*	do												
Wild pepper	*Daphne mezereum*	Introduced												
Oleaster [2]	*Elaeagnus angustifolia*	do												
Buffalo berry	*Shepherdia canadensis*	Native												
Wild sarsaparilla	*Aralia nudicaulis*	do												
Asiatic sarsaparilla [2]	*Acanthopanax sessiliflorum*	Introduced												
Bunchberry	*Cornus canadensis*	Native												
Flowering dogwood	*Cornus florida*	do												
Red osier [2]	*Cornus stolonifera*	do												
Alternate-leaved dogwood	*Cornus alternifolia*	do												
Sour gum	*Nyssa sylvatica*	do												
Wintergreen	*Gaultheria procumbens*	do												
Bearberry	*Arctosaphylos uva-ursi*	do												
Creeping snowberry	*Chiogenes hispidulus*	do												
Black huckleberry	*Gaylussacia baccata*	do												
Early sweet blueberry	*Vaccinium pennsylvanicum*	do												
Swamp blueberry	*Vaccinium corymbosum*	do												
Cranberry	*Vaccinium macrocarpon*	do												
Persimmon [1]	*Diospyros virginiana*	do												
Privet	*Ligustrum vulgare*	Introduced												
Purple berry	*Callicarpa purpurea*	do												

Partridge berry	*Mitchella repens*	Native	
Fly honeysuckle[2]	*Lonicera caerulea*	do	
Tartarian honeysuckle[2]	*Lonicera tatarica*	Introduced	
Snowberry	*Symphoricarpos racemosus*	Native	
Coralberry	*Symphoricarpos vulgaris*	do	
High-bush cranberry	*Viburnum opulus*	do	
Arrowwood	*Viburnum acerifolium*	do	
Sheepberry	*Viburnum lentago*	do	
Common elder	*Sambucus canadensis*	do	
Red-berried elder	*Sambucus racemosa*	do	

[1] Sexes tending to be on separate plants; both required.
[2] Fruit becoming dry at end of season.

NOTES ON THE FOREGOING LIST.

Bayberry. Usual trade name is *Myrica cerifera.*

Hackberry. Fruit scarce in late May and June. *Celtis serrata, C. bungeana,* or *C. mississippiensis* may be substituted.

Mulberry. *Morus tatarica* may be used.

Pokeweed. Let it grow through shrubs or a trellis which will support it in winter.

Barberry. *Berberis amurensis, B. aristata, B. regeliana,* and *B. rehderiana* are good substitutes. The universally planted *B. thunbergi* seems to be of very little value as bird food.

Sassafras. Appears in most catalogs as *S. officinale* or *S. sassafras.*

Flowering apple. The following may be substituted: *P. baccata, P. halliana, P. parkmanni, P. sargentii,* and *P. toringo.*

Chokeberry. Often called *Pyrus* or *Aronia nigra. P. arbutifolia,* another native species, retains its fruit just as long, but the fruit becomes very dry toward the end of the season.

Cherry. *Prunus cerasifera, P. fruticosus, P. japonica pendula, P. sargentii,* and *P. tomentosa,* all introduced, are worth adding.

Sumac. *Rhus copallina* or *R. hirta* (*typhina*) may be substituted for *R. glabra.*

Juneberry. *Amelanchier canadensis,* sold by nurserymen, is a composite species. Several species are now recognized, among which *A. laevis* is a notably early fruiter and *A. sanguinea* a late one. Some fruit of juneberries occasionally hangs much later than the season indicated, but in very dry condition.

Thorns. The species recommended are those usual in the trade. So far as desirability is concerned many native species could be substituted. Cotoneasters, such as *C. coccinea, C. horizontalis, C. microphylla, C. rotundifolia,* and *C. tomentosa,* may also be used.

Strawberry. Often called *Fragaria vesca* var. *americana. F. virginiana* is a fair substitute. Little dealt in; must usually be transplanted from woods and fields.

Blackberry. *Rubus triflorus* is frequently called *R. americanus.*

Rose. All native species have persistent fruit. The small-fruited ones are best for birds. *Rosa carolina* and *R. nitida* are suitable for low grounds; and *R. humilis* (sometimes called *virginiana*) and *R. setigera* may be planted in drier places. *R. micrantha* and *R. multiflora* are among the best introduced roses.

Black alder. *Ilex laevigata* may be used instead of *I. verticillata. I. serrata* is a good introduced species.

Mountain holly. Drops most of its berries in the fall; only a few persist throughout the season indicated.

Bittersweet. *Celastrus orbiculatus,* introduced, may be used.

Buckthorn. *Rhamnus dahurica* is equally good.

Virginia creeper. Often sold under the names *Ampelopsis* and *Parthenocissus. A. heterophylla* and *P. vitacea* may be substituted.

Wild pepper. *Hippophaë rhamnoides* may replace it, especially along coast.

Oleaster. *Elaeagnus longipes, E. multiflora, E. parviflora,* and *E. umbellata* also are good.

Buffalo berry. *Shepherdia* (*Lepargyrea*) *argentea,* the true buffalo berry, furnishes good bird food.

Dogwood. *Cornus paniculata* (*candidissima*), native, and *C. alba* and *C. sanguinea,* introduced, are worthy substitutes.

Huckleberry. *Gaylussacia baccata* is often sold as *G. resinosa.*

Blueberry. Any species may be substituted.
Cranberry. Generic name often given as *Oxycoccus*.
Privet. *Ligustrum acuminatum*, *L. amurense*, *L. ciliatum*, *L. ibota*, and *L. microcarpum*, all introduced, are equally good. Must not be clipped; berries borne on outer twigs.
Purpleberry. Variety *japonica* is the hardy form.
Honeysuckle. *Lonicera glauca*, *L. canadensis*, *L. oblongifolia*, and *L. sempervirens*, native, and *L. maackii*, introduced, may be substituted.
Snowberry. *Symphoricarpus occidentalis* is just as good.
Viburnum. *V. dentatum*, *native*, and *V. sieboldii*, introduced, are worth adding.
Elder. *Sambucus nigra*, introduced, also is valuable.

PROTECTING CULTIVATED FRUITS.

Birds devour cultivated fruit principally because the processes of cultivation diminish the wild supply. The presence of wild fruit in a locality always serves to protect domestic varieties, especially when the wild trees or shrubs are of the same kind as the cultivated ones and ripen earlier.

Table 2 (p. 16) shows in a graphic way the species which may be used to protect the principal classes of cultivated fruits.

PLANTS FOR THE SHORE.

Where the coast is rocky and the soil of ordinary character, conditions are little different from those inland, and except in relation to exposure there need be no especial preference given in the choice of plants. It is worth mentioning, however, that several trees and shrubs are better adapted to withstand the winds so prevalent on the coast. These include three species of juniper (*Juniperus communis*, *J. horizontalis*, and *J. virginiana*), common barberry, English thorn, hybrid crabapple, European and American mountain ashes, smooth and staghorn sumacs, privets, buckthorn, and red-berried elder. Where the soil is chiefly sand, and that often shifting, conditions are not suited to many plants. Selection may be made, however, from the following, all of which are known to thrive in such surroundings:

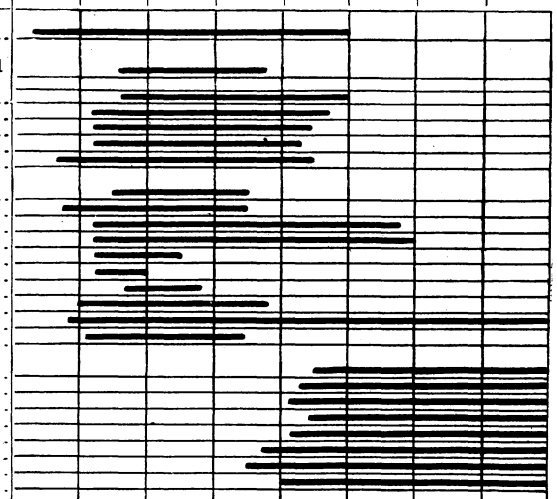
For seed eaters.—Beach grass (*Ammophila arenaria* and *Calamovilfa longifolia*), *Polygonum sachalinense*, and sunflower.

For fruit eaters.—Bayberry (*Myrica cerifera*), sea buckthorn (*Hippophaë rhamnoides*), sand cherry (*Prunus pumila* or *P. cuneata*), beach plum (*Prunus maritima*), cranberries, and bearberry (*Arctostaphylos uva-ursi*).

[The Biological Survey will be pleased to receive information supplementary to that here given regarding any plants that actual trial has shown to be valuable as bird food, and their fruiting seasons.]

TABLE 2.—*Seasons of fruits useful to protect cultivated varieties.*

Common name.	Scientific name.	Native or introduced.	To protect—	Fruiting season.
Wild strawberry	*Fragaria americana*	Native	Strawberries	
Baked-apple berry	*Rubus chamaemorus*	do	Raspberries and blackberries.	
Wild blackberry	*Rubus canadensis*	do	do	
Wild blackberry	*Rubus allegheniensis*	do	do	
Wild blackberry	*Rubus triflorus*	do	do	
Wild blackberry	*Rubus frondosus*	do	do	
Wild pepper	*Daphne mezereum*	Introduced	do	
Red mulberry	*Morus rubra*	Native	Cherries	
White mulberry	*Morus alba*	Introduced	do	
Juneberry	*Amelanchier canadensis*	Native	do	
Wild red cherry	*Prunus pennsylvanica*	do	do	
Japanese cherry	*Prunus japonica pendula*	Introduced	do	
Sargent cherry[1]	*Prunus sargentii*	do	do	
Mahaleb cherry	*Prunus mahaleb*	do	do	
Fly honeysuckle	*Lonicera canadensis*	Native	do	
Fly honeysuckle	*Lonicera caerulea*	do	do	
Red berried elder	*Sambucus racemosa*	do	do	
Asiatic service-tree[1]	*Amelanchier asiatica*	Introduced	Apples and pears	
Silky-leaved pear[1]	*Pyrus elaeagrifolium*	do	do	
Flowering crabapple	*Pyrus floribunda*	do	do	
Dwarf crabapple	*Pyrus toringo*	do	do	
Hybrid crabapple[1]	*Pyrus prunifolia*	do	do	
Cockspur thorn	*Crataegus crus-galli*	Native	do	
English thorn	*Crataegus oxyacantha*	Introduced	do	
One-seeded thorn	*Crataegus monogyna*	do	do	



[1] Apparently procurable only from foreign dealers.